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ABSTRACT

The demand for radiation protection personnel has increased during the past several years and can be expected to continue to increase for several years to come. This document gives the results of the latest survey of institutions offering degree programs in this field. Such a small segment of the total college enrollment is represented in health physics and related studies that other surveys cannot single them out. These students are vital, however, to the continued development and use of radioactive materials in industry, medicine, construction, research, power production, and even agriculture. This publication should be of value to those seeking graduates in various curriculums included, as well as to those who have an interest in pursuing careers in the field. The document covers: trends, placement, foreign nationals, women, and minorities. Appendices include statistical tables accompanying the text. (Author/PG)

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RADIATION PROTECTION

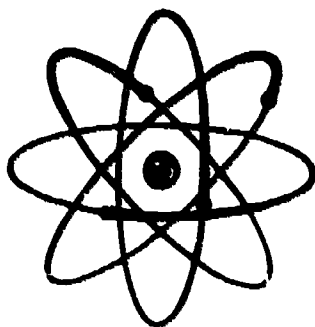
ENROLLMENTS AND DEGREES

ENROLLMENTS-FALL 1973

DEGREES GRANTED JULY 1965-JUNE 1973

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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UNITED STATES ATOMIC ENERGY COMMISSION
Division of Labor Relations

JULY 1974

The demand for radiation protection personnel has increased during the past few years and can be expected to continue to increase for several years to come. Radiation Protection Enrollments and Degrees gives the results of the latest survey of institutions offering degree programs in this field. Such a small segment of the total college enrollment is represented in health physics and related studies that other surveys cannot single them out. These students are vital, however, to the continued development and use of radioactive materials in industry, medicine, construction, research, power production, and even agriculture. This publication should be of value to those seeking graduates in the various curriculums included as well as to those who have an interest in pursuing careers in the field.



H. T. Herrick, Director
Division of Labor Relations

RADIATION PROTECTION ENROLLMENTS AND DEGREES

1973

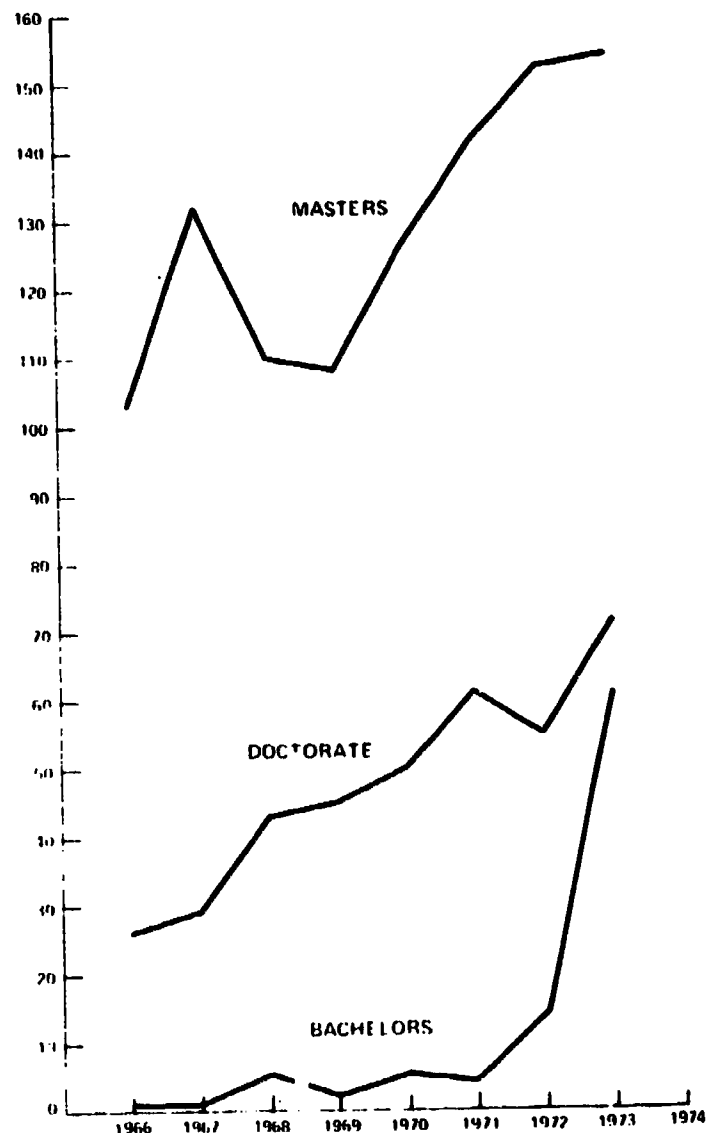
INTRODUCTION

This is the third annual survey of the supply of radiation protection personnel, and the universe of the study has been expanded each year as additional programs are identified. Three institutions and a department were added to the universe of the present survey and to the historical data shown in Appendix I and in Figure 1. Other institutions have expanded their programs over the years to offer additional levels of degrees. All of these additions have served to improve the outlook for the supply of radiation protection personnel since the last more pessimistic report.¹ Demand estimates, however, are also higher because of the rapidly increasing uses of radioactive materials in medicine and industry and the acceleration planned in nuclear power development. The net result is a continuing demand for radiation protection personnel which is quickly absorbing the supply.

The numbers reported in this survey are somewhat skewed because of the inclusion of additional students and graduates of the biophysics programs at the University of California at Berkeley. Although students of the university planning careers in radiation protection had been included in the past, it was determined that many other students in the biophysics programs were completing the same core of radiation protection courses and could fill positions requiring them to "participate in conducting, coordinating, directing or planning a program for the evaluation or control of radiation hazards for an installation, community, or state agency . . ." (see Appendix 6). Irrespective of the career plans of many of these students, their capability to perform the radiation protection functions described above would still be valid, as shown by the findings of Dr. Dade W. Moeller in his analysis of the records of applications for certification by the American Board of Health Physics.² Graduates whose field of study had been radiation biology or biophysics were certified at a rate of 76.6 percent compared to 69.4 percent of those whose study field had been health physics and 71.4 percent of those whose study field had been

physics and mathematics. The extent to which these biophysics students are included in the numbers used in this report should be noted when evaluating the potential supply of radiation protection personnel. Adjustments in historical data as reported in Appendix I have not been made for prior years' graduates of this department.

FIGURE 1
TRENDS IN RADIATION PROTECTION
EDUCATION DEGREES GRANTED 1966-1973



alone took 16 percent, with another 10 percent going to medical facilities (see Table 1 and Figure 2). Most active recruitment by industry and medicine was for masters' graduates. Industry recruited 19 percent of all MS graduates and medical facilities took 12 percent. As in past years, the U.S. Government and its contractors recruited at the graduate level, taking 11 percent of master's and 22 percent of the PhD graduates.

The 29 percent of the 1972-73 MS graduates remaining for further study compares to 33 percent who remained in 1971-72. Thirty-one percent of the

BS graduates and a surprising 11 percent of PhD's also went on for further study compared to 54 percent and four percent, respectively, in 1971-72. Only 23 percent of PhD's went into academic employment compared to 36 percent last year.

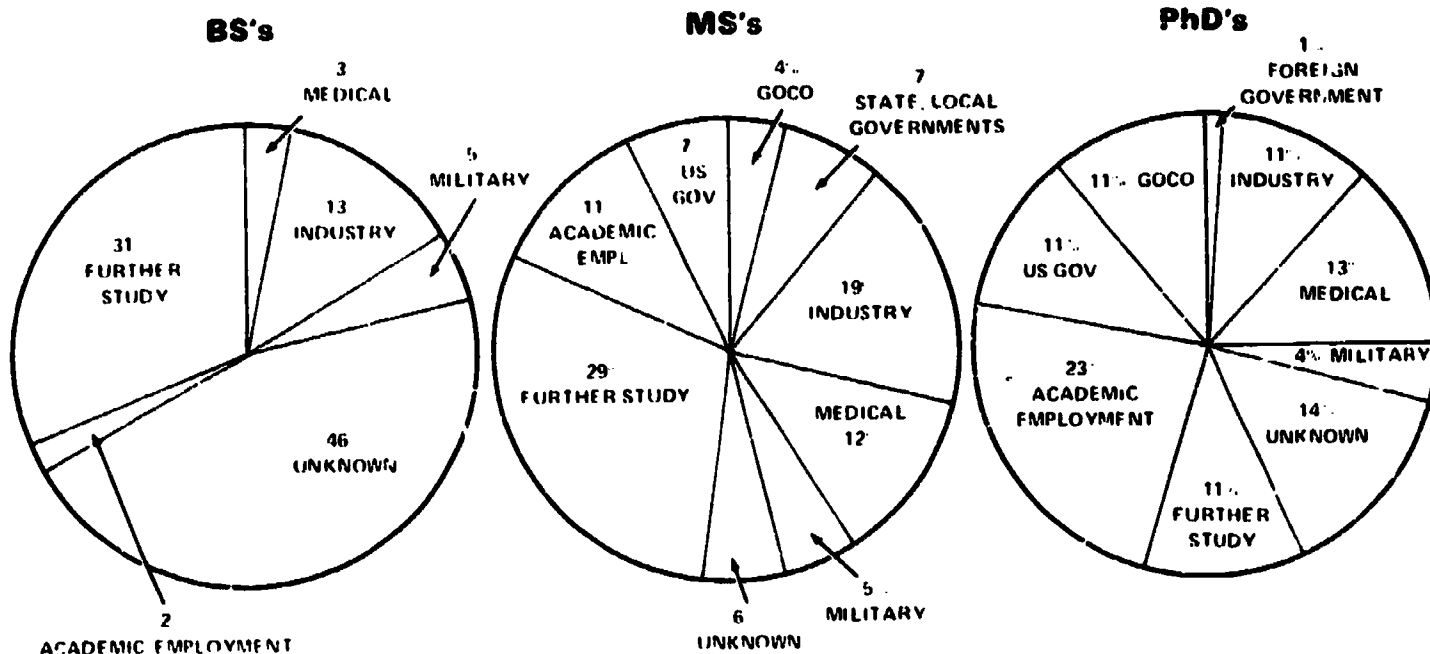
Employment by State and local governments dropped from 11 percent of MS's in 1971-72 to seven percent. These agencies appear to recruit almost exclusively at the MS-level (see Table 1). Figure 2 shows the relative placement of the graduates at all three degree levels.

TABLE 1
POST-GRADUATION PLACEMENT OR PLANS OF RADIATION PROTECTION GRADUATES 1972-1973

Placement or Plans after Graduation	Total		GRADUATES JULY 1972 - JUNE 1973				Doctors*	
	Number	Percent	Bachelors Number	Bachelors Percent	Masters Number	Masters Percent	Number	Percent
Further study	72	25	19	31	45	29	8	11
Academic employment	24	12	1	2	2	11	16	23
U. S. Government employment	19	7	-	-	11	7	8	11
GOCO (Government-Owned, contractor operated)	14	5	-	-	6	6	8	11
State and local Government	12	4	-	-	1	7	1**	1
Medical facilities employment (including teaching hospitals)	30	10	2	3	19	12	9	12
Industry employment	45	16	4	13	29	19	9	11
Military Service	14	5	3	5	7	5	3	4
Unknown	67	16	29	46	9	6	10	14

* Total does not add to 100 because of rounding
** Foreign Government

FIGURE 2
RADIATION PROTECTION GRADUATE PLACEMENT 1973



FOREIGN NATIONALS

Foreign nationals among radiation protection graduates represented only five percent of the total (see Table 2), the same percentage as in 1971-72. In that year, all graduates who were non-U.S. citizens received MS degrees. The 1972-73 non-citizen graduates received one BS, eight MS and four PhD

degrees. At least one of the PhD recipients went to work for a foreign government.

Non-citizens among graduate enrollees in the Fall of 1973 represented nine percent at both the MS and PhD levels. Six percent of seniors and three percent of juniors were foreign nationals.

Appendix 3 shows the number of foreign nationals by institution.

**TABLE 2
FOREIGN NATIONALS ENROLLMENTS
AND DEGREES IN RADIATION PROTECTION**

ENROLLMENT FALL 1973				DEGREES GRANTED JULY 1972 - JUNE 1973			
JUNIOR YEAR	SENIOR YEAR	MASTERS	DOCTORATE	BACHELOR	MASTERS	DOCTORATE	TOTAL
= %	= %	= %	= %	= %	= %	= %	= %
3 3	6 6	29 9	33 9	1 2	8 5	4 6	13 5

WOMEN AND MINORITIES

No accurate information has been available to indicate the degree of participation by women and minorities in the radiation protection field. A cursory examination of the roster of certified health physicists on the membership list of the Health Physics Society reveals very few female, oriental, or Spanish names. At any gathering of radiation protection personnel, one finds very few, if any, identifiable minority group representatives. Radiation protection is a field which should interest the scientifically talented student with humanitarian leanings, regardless of sex or ethnic origin.

To get more accurate information on the numbers of women and minorities training in the radiation protection field, the AEC modified the enrollment and degree data collection form (see Appendix 6) to obtain such information. It was gratifying to find that women are beginning to enter programs of radiation protection in increasing numbers, and the three receiving PhD's made up four percent of the total PhD's. Women also represented six percent of MS and eight percent of BS graduates (see Table 3 and Appendix 3). These figures are substantially higher than the estimated three percent or less who are presently in the field. Indicative of the increasing interest in the field by women is the present enrollment: 23 or seven percent of the PhD's; 24 or eight percent of the MS's; eight seniors, and 24 juniors are women.

Blacks are greatly underrepresented as evidenced by the few participating at all levels. Two blacks (three percent) received PhD's and only two, or less than one percent, are PhD candidates (see Appendix 3). Only one black received an MS, and four are presently enrolled in MS programs. However, three percent of seniors and 16 percent of juniors are blacks.

Spanish-speaking (or Spanish-surnamed) persons represent an even smaller proportion in the field. There was only one Spanish-speaking graduate a PhD. Spanish-speaking degree candidates include two working for PhD's, five working for MS's, and one undergraduate senior. Six Spanish-speaking juniors represent five percent of total juniors in radiation protection.

U.S. citizens of oriental extraction are generally represented in larger numbers than blacks. Two PhD, four master's and one bachelor's degrees were awarded to this ethnic group. Three full-time and one part-time PhD candidates, six full-time and one part-time Master's degree candidates, and four seniors are in this category.

The increased participation by female, black, and Spanish-speaking persons at the undergraduate junior level as shown in Table 3 is not indicative of a nationwide trend, however. Most credit must be given to a new BS-level program at Manhattan College.

which has aggressively sought minorities and women. Participants in this program have just reached the junior level and represent 50 percent of the women.

94 percent of the blacks, and 100 percent of the Spanish-speaking juniors reported in this study.

TABLE 3
WOMEN AND MINORITIES ENROLLMENTS
AND DEGREES IN RADIATION PROTECTION

	ENROLLMENT FALL 1973								DEGREES GRANTED JULY 1972 - JUNE 1973							
	JUNIOR YEAR		SENIOR YEAR		MASTER		DOCTORATE		BACHELOR		MASTER		DOCTORATE		TOTAL	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Women, U.S. Citizens	24	22	8	8	24	8	23	7	5	8	9	6	3	4	17	6
Blacks, U.S. Citizens	18	16	3	3	4	1	2	1	0	-	1	1	2	3	3	1
Spanish Speaking, U.S. Citizens	6	5	1	1	5	2	2	1	0	-	0	-	1	1	1	-
Oriental, U.S. Citizens	0	-	4	4	7	2	4	1	1	2	4	3	2	3	7	2

1. USAEC, *Radiation Protection Enrollment and Degree Survey*, WASH-1220 (73), which is the source of all references to 1971-72 information throughout this study.
2. Moeller, Dade W., *Analysis of the Records of American Board of Health Physics Applicants*,

HSPH/EHS 70-3, Harvard University, Boston, July 1970.

3. U.S. Atomic Energy Commission, Regulatory Guide 8.8, "Information Relevant to Maintaining Occupational Radiation Exposure as Low as Practicable (Nuclear Reactors)," July 1973.

Appendix 1

RADIATION PROTECTION DEGREES GRANTED 1966-1973

Bachelor
Master
Doctorate

STATE INSTITUTION	1965 1966			1966 1967			1967 1968			1968 1969			1969 1970			1970 1971			1971 1972			1972 1973		
	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D
<u>Alabama</u> Univ. of Alabama, Birmingham .																								
<u>California</u> Univ. of California, Berkeley. Univ. of California, LA. . . .	3	2		5	1		5	2		3			1			4	3		5			25	4	9
	3			3	2		1	3		2	3		2	1		6	2		6				8	2
<u>Colorado</u> Colorado State University. . . .	2	1		9			2	3		10	4		8	4		5	3		6	6			7	10
<u>Connecticut</u> Yale University.				5			4			3			4			1								
<u>Florida</u> Univ. of Florida Univ. of Miami, Sch. of Medicine	6			6	1		2	1		5	1		2			11	2		12	3		10	2	
	4			6			7			4			3						1				7	
<u>Georgia</u> Emory Univ. Sch. of Medicine 1/ Georgia Inst. of Technology 2/	2			10			2						2						3			3		
	5			4			3			6			4	1		4	4		1	12	1	5	10	3
<u>Illinois</u> Univ. of Illinois, Urbana. . . . Northwestern University. . . .	2			1			1	3		1				1		5	1		5	1		2	1	
	1			1			1			1			3	1		2	1		3	1		1	4	2
<u>Indiana</u> Purdue University.	7	5		6	5		3	4		5	11		6	10		5	6		2	4	8	6	11	12
<u>Iowa</u> Univ. of Iowa 1/					1		3			1	1		2	2			1		1	1			1	3
<u>Kansas</u> Univ. of Kansas.	1	2		1	4	1	1	5	3	1	2	3	3	4	8	2	3		1	4	5	2	3	5
<u>Kentucky</u> U. of Kentucky, Medical Center													1			1			1				4	

(Graduate Program started January 1968)

RADIATION PROTECTION - DEGREES GRANTED - 1966-1973 - By Institution

STATE INSTITUTION	1965 1966		1966 1967		1967 1968		1968 1969		1969 1970		1970 1971		1971 1972		1972 1973	
	B	M D	B	M D	B	M D	B	M D	B	M D	B	M D	B	M D	B	M D
<u>Maryland</u>																
Johns Hopkins University	-	-	-	-	1	-	-	-	-	1	-	2	1	-	-	2
<u>Massachusetts</u>																
Harvard University	-	1	-	-	1	-	-	2	1	-	5	1	-	4	1	-
Lowell Tech. Institute																

Program at B.S. level began Fall 1972

RADIATION PROTECTION - DEGREES GRANTED - 1960-1973 - By Institution

STATE INSTITUTION	JULY JUNE			1965 1966			1966 1967			1967 1968			1968 1969			1969 1970			1970 1971			1971 1972			1972 1973		
	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D
Pennsylvania																											
Duquesne University	-	3	-	Program began Fall 1972			-	3	-	-	1	-	-	2	-	-	8	1	-	-	8	2	-	-	8	2	1
Temple University	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
U. of Pennsylvania Hospital . . .	-	-	-	-	-	-	-	-	2	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Univ. of Pittsburgh	-	6	1	-	4	1	-	8	-	-	-	3	1	-	6	1	-	5	-	-	5	2	-	-	12	-	-
Puerto Rico																											
Univ. of Puerto Rico.	-	-	-	-	-	-	-	-	-	-	-	5	-	-	5	-	-	5	-	-	10	-	-	4	-	-	-
Tennessee																											
Univ. of Tennessee.	-	1	-	-	2	-	-	2	7	-	2	3	-	1	1	3	3	3	5	5	-	3	3	-	2	-	-
Vanderbilt University 2/.	-	10	-	-	4	-	-	4	2	3	1	2	7	1	3	3	1	4	2	1	3	10	-	-	1	5	-
Texas																											
Texas A&M University.	-	-	-	-	-	-	-	1	-	-	-	2	-	-	4	1	-	8	-	-	4	-	-	5	5	-	-
Univ. of Texas.	-	1	2	-	-	-	-	4	2	-	-	-	-	-	1	1	-	1	2	-	-	-	-	-	-	Program Cancelled	
Washington																											
Univ. of Washington	-	-	-	-	5	-	-	-	5	-	-	2	-	-	4	-	-	-	-	-	5	-	-	-	1	1	-
TOTAL.																											
	1	103	26	1	132	29	5	110	43	2	108	45	5	126	50	4	161	61	14	152	55	61	154	71	-	-	-

1/ Added to universe this year

2/ Dept. of Physics graduates added; Dept. of Engineering graduates previously reported.

3/ Four graduates with Master's and Ph.D.'s were counted by the University only at Master's level to avoid inflation of totals, 1966-1967.

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APPENDIX 2

ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION
RADIATION PROTECTION

FT Full Time
PT Part Time

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1973										DEGREES GRANTED		
	JUNIOR		SENIOR		MASTER		DOCTORATE		JULY 1972 - JUNE 1973		BACH	MASTER	PHD
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT			
ALABAMA													
UNIVERSITY OF ALABAMA IN BIRMINGHAM													
RADIOBIOLOGY OR BIOPHYSICS	0	0	1	0	0	0	0	0	0	0			
HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION	1	0	0	0	0	0	0	0	0	0	0	0	0
SCHOOL TOTAL	1	0	1	0	0	0	0	0	0	0	0	0	0
STATE TOTAL	1	0	1	0	0	0	0	0	0	0	0	0	0
CALIFORNIA													
UNIVERSITY OF CALIFORNIA, BERKELEY													
ENGINEERING OR BASIC SCIENCES, HEALTH PHYSICS OPTION	0	0	0	0	2	0	1	0	0	0	0	2	1
MEDICAL RADIATION PHYSICS OR RADIOLOGICAL PHYSICS	0	0	0	0	0	0	3	0	0	0	0	0	1
RADIOBIOLOGY OR BIOPHYSICS	10	0	25	0	2	0	91	0	25	0	25	0	7
HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION	0	0	0	0	13	0	0	0	0	0	0	2	0
SCHOOL TOTAL	10	0	25	0	17	0	95	0	25	0	25	4	9
UNIVERSITY OF CALIFORNIA, LOS ANGELES													
MEDICAL RADIATION PHYSICS OR RADIOLOGICAL PHYSICS					17	1	20	1		1		0	2
SCHOOL TOTAL	0	0	0	0	17	1	20	1		1	0	0	2
STATE TOTAL	10	0	25	0	34	1	115	1	25	1	25	12	11
COLORADO													
COLORADO STATE UNIVERSITY													
VETERINARY RADIOLOGY					1		1					1	1
ENGINEERING OR BASIC SCIENCES, HEALTH PHYSICS OPTION					3		15					3	7
RADIOBIOLOGY OR BIOPHYSICS					4		4			2		3	2
HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION													
SCHOOL TOTAL	0	0	0	0	8	0	20	2	0	2	0	7	10
STATE TOTAL	0	0	0	0	8	0	20	2	0	2	0	7	10
FLORIDA													
UNIVERSITY OF FLORIDA													
ENGINEERING OR BASIC SCIENCES, HEALTH PHYSICS OPTION					1		2					4	1
MEDICAL RADIATION PHYSICS OR RADIOLOGICAL PHYSICS					6		2			1		6	1
HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION					4		2					10	2
SCHOOL TOTAL	0	0	0	0	11	0	4	1	0	1	0	10	2
UNIVERSITY OF MIAMI													
HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION					3	2						7	
SCHOOL TOTAL	0	0	0	0	3	2	0	0	0	0	0	7	0
STATE TOTAL	0	0	0	0	14	2	4	1	0	1	0	17	2

**ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION
RADIATION PROTECTION**

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1973						DEGREES GRANTED			
	JUNIOR			DOCTORATE			JULY 1972 - JUNE 1973			
	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD	
GEORGIA										
EMORY UNIVERSITY										
RADIOLOGICAL SCIENCE										
HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION										
SCHOOL TOTAL	0	0	1	0	0	0	0	3	0	
GEORGIA INSTITUTE OF TECHNOLOGY										
ENGINEERING OR BASIC SCIENCES, HEALTH PHYSICS OPTION										
RADIOBIOLOGY OR BIOPHYSICS	3		2		3		3	10	1	
HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION	6		6		8		2	10	2	
SCHOOL TOTAL	9	0	8	0	11		5	10	3	
STATE TOTAL	9	0	9	0	11		5	13	3	
ILLINOIS										
NORTHWESTERN UNIVERSITY										
ENGINEERING OR BASIC SCIENCES, HEALTH PHYSICS OPTION			2		3		1	4	2	
HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION										
SCHOOL TOTAL	0	0	2	0	3		1	4	2	
UNIVERSITY OF ILLINOIS AT URBANA										
ENGINEERING OR BASIC SCIENCES, HEALTH PHYSICS OPTION										
RADIOBIOLOGY OR BIOPHYSICS	0	0	0	0	0		0	1	0	
SCHOOL TOTAL	0	0	0	0	0		0	1	1	
STATE TOTAL	0	0	2	0	3		1	6	3	
INDIANA										
PURDUE UNIVERSITY										
ENVIRONMENTAL HEALTH										
MEDICAL RADIOLOGICAL PHYSICS	15	0	3	0	0		0	4	6	
RADIOBIOLOGY OR BIOPHYSICS	0	0	0	0	0		0	1	0	
HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION	2	0	0	0	14		1	6	6	
SCHOOL TOTAL	17	0	3	0	31		6	11	12	
STATE TOTAL	17	0	3	0	31		6	11	12	
IOWA										
UNIVERSITY OF IOWA										
RADIOBIOLOGY OR BIOPHYSICS										
SCHOOL TOTAL	0	0	0	0	7		0	1	3	
STATE TOTAL	0	0	0	0	7		0	1	3	

ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION RADIATION PROTECTION

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STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	JUNIOR		SENIOR		MASTER		DOCTORATE				BACH		PHD
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	MASTER	PHD
KANSAS													
UNIVERSITY OF KANSAS													
RADIATION PHYSICS	2		1		2		3		4		2		1
MEDICAL RADIATION PHYSICS OR RADIOLOGICAL PHYSICS					1		2		1			2	1
RADIOLOGY OR BIOPHYSICS					2		2		1			1	1
HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION													2
SCHOOL TOTAL	2		1		2		3		4		2		1
STATE TOTAL	2		1		5		7		6		2		5
KENTUCKY													
UNIVERSITY OF KENTUCKY													
MEDICAL RADIATION PHYSICS OR RADIOLOGICAL PHYSICS					8							3	
HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION					2							1	
SCHOOL TOTAL	0		0		10		0		0		0		0
STATE TOTAL	0		0		10		0		0		0		0
MARYLAND													
JOHNS HOPKINS UNIVERSITY													
MEDICAL RADIATION PHYSICS OR RADIOLOGICAL PHYSICS					1		3		1				1
RADIOLOGY OR BIOPHYSICS													1
SCHOOL TOTAL	0		0		1		3		1				2
STATE TOTAL	0		0		1		3		1		0		2
MASSACHUSETTS													
HARVARD UNIVERSITY													
MEDICAL RADIATION PHYSICS OR RADIOLOGICAL PHYSICS					4		5				0		0
RADIOLOGY OR BIOPHYSICS					1		5				0		1
HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION					1		5				0		0
SCHOOL TOTAL	0		0		6		15		0		0		1
LOWELL TECHNOLOGICAL INSTITUTE													
RADIOLOGICAL SCIENCE					5						9		
HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION	12	2	26	5					0		9		0
SCHOOL TOTAL	12	2	26	5	5		0		0		9		0
STATE TOTAL	12	2	26	5	11		0		0		9		1
MICHIGAN													
UNIVERSITY OF MICHIGAN													
HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION					15		3		1			5	3
SCHOOL TOTAL	0		0		15		3		1		0		3
STATE TOTAL	0		0		15		3		1		0		3

ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION
RADIATION PROTECTION

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	JUNIOR		SENIOR		MASTER		DOCTORATE				BACH	MASTER	PHD
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT			
MINNESOTA UNIVERSITY OF MINNESOTA HEALTH PHYSICS, RADIATION, HEALTH OR RADIATION PROTECTION	0	0	0	0	8	1	0	2	0	0	0	8	0
SCHOOL TOTAL	0	0	0	0	8	1	0	2	0	0	0	8	0
STATE TOTAL	0	0	0	0	8	1	0	2	0	0	0	8	0
NEW JERSEY RUTGERS UNIVERSITY AEROSOL PHYSICS ENVIRONMENTAL RADIOACTIVITY RADIATION CHEMISTRY RADIOBIOLOGY OR BIOPHYSICS HEALTH PHYSICS, RADIATION, HEALTH OR RADIATION PROTECTION	0	0	0	0	0	0	1	4	0	0	0	0	1
SCHOOL TOTAL	0	0	0	0	0	0	1	4	0	0	0	0	1
STATE TOTAL	0	0	0	0	0	0	1	4	0	0	0	0	1
NEW YORK MANHATTAN COLLEGE RADIOLOGY ADMINISTRATION NUCLEAR MEDICINE BASIC SCIENCES MEDICAL RADIATION, PHYSICS OR RADIOLOGICAL PHYSICS HEALTH PHYSICS, RADIATION, HEALTH OR RADIATION PROTECTION	0	0	0	0	0	0	0	0	0	0	0	0	0
SCHOOL TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
STATE TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW YORK N.Y.U. MEDICAL CENTER HEALTH PHYSICS, RADIATION, HEALTH OR RADIATION PROTECTION	0	0	0	0	0	0	0	0	0	0	0	0	0
SCHOOL TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
STATE TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
PENNSYLVANIA PENNSYLVANIA POLYTECHNIC INSTITUTE HEALTH PHYSICS, RADIATION, HEALTH OR RADIATION PROTECTION	0	0	0	0	0	0	0	0	0	0	0	0	0
SCHOOL TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
STATE TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
SICILY SICILY-METTERING DIV - CORNELL UNIVERSITY MEDICAL RADIATION PHYSICS OR RADIOLOGICAL PHYSICS RADIOBIOLOGY OR BIOPHYSICS	0	0	0	0	0	0	0	0	0	0	0	0	0
SCHOOL TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
STATE TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
UNIVERSITY OF ROCHESTER RADIOBIOLOGY OR BIOPHYSICS	0	0	0	0	0	0	0	0	0	0	0	0	0
SCHOOL TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
STATE TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0

**ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION
RADIATION PROTECTION**

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1973										DEGREES GRANTED		
	JUNIOR					SENIOR					DOCTORATE		
	FT	PT	FT	PT	FT	FT	PT	FT	PT	FT	BACH	MASTER	PHD
NORTH CAROLINA NORTH CAROLINA STATE UNIVERSITY AT RALEIGH HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION	0	0	0	0	1	0	0	0	0	0	0	0	0
SCHOOL TOTAL	0	0	0	0	1	0	0	0	0	0	0	0	0
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION	0	0	0	0	11	1	1	0	0	3	0	4	0
SCHOOL TOTAL	0	0	0	0	11	1	1	0	0	3	0	4	0
STATE TOTAL	0	0	0	0	12	1	1	0	0	3	0	4	0
OHIO UNIVERSITY OF CINCINNATI RADIOLOGY ADMINISTRATION MEDICAL RADIATION PHYSICS OR RADIOLOGICAL PHYSICS	0	0	0	0	4	0	0	0	0	0	0	6	0
SCHOOL TOTAL	0	0	0	0	4	0	0	0	0	0	0	6	0
STATE TOTAL	0	0	0	0	7	0	0	0	0	0	0	9	0
OKLAHOMA UNIVERSITY OF OKLAHOMA HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION	0	0	0	0	3	0	0	0	0	1	0	2	1
SCHOOL TOTAL	0	0	0	0	3	0	0	0	0	1	0	2	1
STATE TOTAL	0	0	0	0	0	0	0	0	0	1	0	2	1
PENNSYLVANIA DUQUESNE UNIVERSITY HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION	1	1	0	0	0	0	0	0	0	0	0	0	0
SCHOOL TOTAL	1	1	0	0	0	0	0	0	0	0	0	0	0
TEMPLE UNIVERSITY RADIOPHARMACY HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION	7	5	0	0	1	0	0	0	0	8	2	2	1
SCHOOL TOTAL	7	5	0	0	1	0	0	0	0	8	2	2	1
UNIVERSITY OF PENNSYLVANIA MEDICAL RADIATION PHYSICS OR RADIOLOGICAL PHYSICS	0	0	0	0	0	0	0	0	0	2	0	0	0
SCHOOL TOTAL	0	0	0	0	0	0	0	0	0	2	0	0	0
UNIVERSITY OF PITTSBURGH HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION	0	0	0	0	13	7	4	0	0	4	12	12	0
SCHOOL TOTAL	0	0	0	0	13	7	4	0	0	4	0	12	0

ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION RADIATION PROTECTION

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1973										DEGREES GRANTED		
	JUNIOR		SENIOR		MASTER		DOCTORATE		PT	PT	BACH	MASTER	PHD
	FT	PT	FT	PT	FT	PT	FT	PT					
STATE TOTAL	8	0	6	0	17	7	4	6			8	14	1
PUERTO RICO UNIVERSITY OF PUERTO RICO, RIO PIEDRAS HEALTH PHYSICS, RADIATION, HEALTH OR RADIATION PROTECTION					4	2						4	
SCHOOL TOTAL	0	0	0	0	4	2	0	0			0	4	0
STATE TOTAL	0	0	0	0	4	2	0	0			0	4	0
TENNESSEE UNIVERSITY OF TENNESSEE, KNOXVILLE HEALTH PHYSICS, RADIATION, HEALTH OR RADIATION PROTECTION					8		6					2	
SCHOOL TOTAL	0	0	0	0	8	0	6	0			0	2	0
VANDEBILT UNIVERSITY NUCLEAR PHYSICS ENGINEERING OR BASIC SCIENCES, HEALTH PHYSICS OPTION MEDICAL RADIATION, PHYSICS OR RADIOLOGICAL PHYSICS HEALTH PHYSICS, RADIATION, HEALTH OR RADIATION PROTECTION					1		4					1	1
SCHOOL TOTAL	0	0	0	0	3	0	8	0			0	1	5
STATE TOTAL	0	0	0	0	11	0	14	0			0	3	5
TEXAS TEXAS A & M UNIVERSITY RADIOLOGY OR BIOPHYSICS HEALTH PHYSICS, RADIATION, HEALTH OR RADIATION PROTECTION					6	2	1	1			5	1	
SCHOOL TOTAL	10	0	10	0	6	2	1	1			5	5	0
STATE TOTAL	10	0	10	0	6	2	1	1			5	5	0
WASHINGTON UNIVERSITY OF WASHINGTON MEDICAL RADIATION PHYSICS OR RADIOLOGICAL PHYSICS RADIOLOGY OR BIOPHYSICS HEALTH PHYSICS, RADIATION, HEALTH OR RADIATION PROTECTION					2							1	1
SCHOOL TOTAL	0	0	0	0	9	2	0	0			0	1	1
STATE TOTAL	0	0	0	0	9	2	0	0			0	1	1
GRAND TOTAL	69	41	83	12	244	63	303	48			61	154	71

APPENDIX 3

MINORITIES, WOMEN
ANDFOREIGN NATIONALS
ENROLLMENTS AND DEGREES BY SCHOOLS
RADIATION PROTECTION

BEST COPY AVAILABLE

STATE - INSTITUTION	ENROLLMENT FALL 1973								DEGREES GRANTED JULY 1972 - JUNE 1973			
	JUNIOR		SENIOR		MASTER		DOCTORATE		BACH	MASTER	PHD	
	FT	PT	FT	PT	FT	PT	FT	PT				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
CALIFORNIA												
UNIVERSITY OF CALIFORNIA, BERKELEY			3							1	2	
ORIENTAL, U.S. CITIZENS										1	2	
FOREIGN NATIONALS - ALL CURRICULA			5									
UNIVERSITY OF CALIFORNIA, LOS ANGELES					2		3			1		
ORIENTAL, U.S. CITIZENS							1					
BLACKS, U.S. CITIZENS							3	1				
WOMEN, U.S. CITIZENS					1		1					
FOREIGN NATIONALS - ALL CURRICULA												
COLORADO												
COLORADO STATE UNIVERSITY					2							
SPANISH SPEAKING U.S. CITIZENS							2			1		1
WOMEN, U.S. CITIZENS							3					1
FOREIGN NATIONALS - ALL CURRICULA												
FLORIDA												
UNIVERSITY OF FLORIDA					1					1		
WOMEN, U.S. CITIZENS												
UNIVERSITY OF MIAMI												
WOMEN, U.S. CITIZENS												
GEORGIA												
EMORY UNIVERSITY			1									
WOMEN, U.S. CITIZENS					1							
FOREIGN NATIONALS - ALL CURRICULA					1							
GEORGIA INSTITUTE OF TECHNOLOGY							2					
BLACKS, U.S. CITIZENS					2							
FOREIGN NATIONALS - ALL CURRICULA												
ILLINOIS												
NORTHWESTERN UNIVERSITY							1			2		
ORIENTAL, U.S. CITIZENS												
WOMEN, U.S. CITIZENS			1									
UNIVERSITY OF ILLINOIS AT URBANA												
ORIENTAL, U.S. CITIZENS										0		0
BLACKS, U.S. CITIZENS										0		1
FOREIGN NATIONALS - ALL CURRICULA										0		0
	0	0	0	0	1	0	0	0	0			
	0	0	0	0	0	0	0	0	0			
	0	0	0	0	0	0	5	0	0			

MINORITIES, WOMEN
AND
FOREIGN NATIONALS
ENROLLMENTS AND DEGREES BY SCHOOLS
RADIATION PROTECTION

STATE - INSTITUTION	ENROLLMENT FALL 1973										DEGREES GRANTED		
	JUNIOR		SENIOR		MASTER		DOCTORATE		JULY 1972 - JUNE 1973		MASTER	PHD	
	FT	PT	FT	PT	FT	PT	FT	PT	BACH				
INDIANA													
PURDUE UNIVERSITY													
ORIENTAL, U.S. CITIZENS	0	0	0	0	1	0	0	0	0	0	0	0	
BLACKS, U.S. CITIZENS	1	0	0	0	0	0	0	0	0	1	0	0	
WOMEN, U.S. CITIZENS	0	0	1	0	0	0	2	0	5	0	0	0	
FOREIGN NATIONALS - ALL CURRICULA	0	0	0	0	0	0	8	0	0	2	1	1	
IOWA													
UNIVERSITY OF IOWA													
SPANISH SPEAKING U.S. CITIZENS					1		1						
WOMEN, U.S. CITIZENS					1		2						
FOREIGN NATIONALS - ALL CURRICULA					1								
KANSAS													
UNIVERSITY OF KANSAS													
WOMEN, U.S. CITIZENS					1		1	1	1	1			
FOREIGN NATIONALS - ALL CURRICULA													
KENTUCKY													
UNIVERSITY OF KENTUCKY													
WOMEN, U.S. CITIZENS					1		1			1			
FOREIGN NATIONALS - ALL CURRICULA										0			
MARYLAND													
JAMES HOPKINS UNIVERSITY													
WOMEN, U.S. CITIZENS						2							
FOREIGN NATIONALS - ALL CURRICULA					1								
MASSACHUSETTS													
HARVARD UNIVERSITY													
ORIENTAL, U.S. CITIZENS					1		0			0	0	0	
WOMEN, U.S. CITIZENS					0		3			0	1	0	
FOREIGN NATIONALS - ALL CURRICULA					1		0			0			
LEWELL TECHNOLOGICAL INSTITUTE													
ORIENTAL, U.S. CITIZENS					1				1				
SPANISH SPEAKING U.S. CITIZENS					1								
WOMEN, U.S. CITIZENS					3								
FOREIGN NATIONALS - ALL CURRICULA					1				1				

MINORITIES, WOMEN
AND
FOREIGN NATIONALS
ENROLLMENTS AND DEGREES BY SCHOOLS
RADIATION PROTECTION

STATE - INSTITUTION	ENROLLMENT FALL 1973										DEGREES GRANTED			
	JUNIOR		SENIOR		MASTER		DOCTORATE		JULY 1972 - JUNE 1973		BACH		MASTER	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
MICHIGAN														
UNIVERSITY OF MICHIGAN														
SPANISH SPEAKING U.S. CITIZENS														
FOREIGN NATIONALS - ALL CURRICULA														
MINNESOTA														
UNIVERSITY OF MINNESOTA														
SPANISH SPEAKING U.S. CITIZENS														
WOMEN, U.S. CITIZENS														
NEW JERSEY														
RUTGERS UNIVERSITY														
WOMEN, U.S. CITIZENS														
FOREIGN NATIONALS - ALL CURRICULA														
NEW YORK														
MANHATTAN COLLEGE														
SPANISH SPEAKING U.S. CITIZENS														
BLACKS, U.S. CITIZENS														
WOMEN, U.S. CITIZENS														
N.Y.U. MEDICAL CENTER														
WOMEN, U.S. CITIZENS														
FOREIGN NATIONALS - ALL CURRICULA														
SLOANE-KETTERING DIV - CORNELL UNIVERSITY														
WOMEN, U.S. CITIZENS														
UNIVERSITY OF ROCHESTER														
SPANISH SPEAKING U.S. CITIZENS														
WOMEN, U.S. CITIZENS														
FOREIGN NATIONALS - ALL CURRICULA														
NORTH CAROLINA														
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL														
BLACKS, U.S. CITIZENS														
FOREIGN NATIONALS - ALL CURRICULA														
OKLAHOMA														
UNIVERSITY OF OKLAHOMA														
WOMEN, U.S. CITIZENS														

MINORITIES, WOMEN
AND
FOREIGN NATIONALS
ENROLLMENTS AND DEGREES BY SCHOOLS
RADIATION PROTECTION

STATE - INSTITUTION	ENROLLMENT FALL 1973										DEGREES GRANTED		
	JUNIOR			SENIOR			MASTER			DOCTORATE			JULY 1972 - JUNE 1973
	FT	PT		FT	PT		FT	PT		FT	PT		
PENNSYLVANIA													PHD
DUQUESNE UNIVERSITY				1									
WOMEN, U.S. CITIZENS													
TEMPLE UNIVERSITY				0			1						
WOMEN, U.S. CITIZENS													
FOREIGN NATIONALS - ALL CURRICULA													
UNIVERSITY OF PENNSYLVANIA							2				1		
WOMEN, U.S. CITIZENS													
UNIVERSITY OF PITTSBURGH							2						
WOMEN, U.S. CITIZENS													
PUERTO RICO													
UNIVERSITY OF PUERTO RICO, RIO PIEDRAS							2				1		
SPANISH SPEAKING U.S. CITIZENS											1		
BLACKS, U.S. CITIZENS							2						
FOREIGN NATIONALS - ALL CURRICULA													
TENNESSEE													
UNIVERSITY OF TENNESSEE, KNOXVILLE													
WOMEN, U.S. CITIZENS										1			
FOREIGN NATIONALS - ALL CURRICULA							5			1			
VANDERBILT UNIVERSITY													
BLACKS, U.S. CITIZENS							1						1
FOREIGN NATIONALS - ALL CURRICULA													1
TEXAS													
TEXAS A & M UNIVERSITY													
WOMEN, U.S. CITIZENS													
FOREIGN NATIONALS - ALL CURRICULA													
WASHINGTON													
UNIVERSITY OF WASHINGTON													
ORIENTAL, U.S. CITIZENS							1						
FOREIGN NATIONALS - ALL CURRICULA							3						

APPENDIX 4

ENROLLMENTS AND DEGREES BY SUBFIELDS
RADIATION PROTECTIONDEGREES GRANTED
JULY 1972 - JUNE 1973

ENROLLMENTS FALL 1973

CURRICULUM OR OPTION	JUNIOR YEAR	SENIOR YEAR	MASTER	DOCTORATE	DEGREES BACH	DEGREES MASTER	DEGREES PHD
HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION	47	43	206	105	16	106	27
RADIOBIOLOGY OF BIOPHYSICS	16	32	20	170	27	13	27
MEDICAL RADIATION PHYSICS OR RADIOLOGICAL PHYSICS	6	2	49	51	0	19	6
ENGINEERING OR BASIC SCIENCES, HEALTH PHYSICS OPTION	3	4	7	1	3	5	2
NUCLEAR MEDICINE BASIC SCIENCES	3	0	0	0	0	0	0
ENVIRONMENTAL HEALTH	15	3	4	12	5	4	6
RADIOLOGY ADMINISTRATION	11	4	4	0	0	6	0
RADIATION CHEMISTRY	0	0	1	1	0	0	0
ENVIRONMENTAL RADIOACTIVITY	0	0	0	1	0	0	0
AEROSOL PHYSICS	0	0	0	5	0	0	1
RADIOLOGICAL SCIENCE	0	1	11	0	0	1	0
RADIATION BIOPHYSICS	2	1	2	0	2	0	1
RADIOPHARMACY	7	5	1	0	8	0	0
VETERINARY RADIOLOGY	0	0	1	1	0	0	0
NUCLEAR PHYSICS	0	0	1	4	0	0	1
GRAND TOTAL	110	95	307	351	61	154	71

APPENDIX 5

RADIATION PROTECTION
CURRICULUM OF OPTION BY INSTITUTION
FALL 1973

CURRICULUM OF OPTION	INSTITUTION
HEALTH PHYSICS, RADIATION HEALTH OR RADIATION PROTECTION	COLORADO STATE UNIVERSITY
	DUQUESNE UNIVERSITY
	EMORY UNIVERSITY
	GEORGIA INSTITUTE OF TECHNOLOGY
	HARVARD UNIVERSITY
	LOWELL TECHNOLOGICAL INSTITUTE
	MANHATTAN COLLEGE
	N.Y.U. MEDICAL CENTER
	NORTH CAROLINA STATE UNIVERSITY AT RALEIGH
	NORTHWESTERN UNIVERSITY
	PURDUE UNIVERSITY
	PENNSYLVANIA POLYTECHNIC INSTITUTE
	RUTGERS UNIVERSITY
	TEMPLE UNIVERSITY
	TEXAS A & M UNIVERSITY
	UNIVERSITY OF ALABAMA IN BIRMINGHAM
	UNIVERSITY OF CALIFORNIA, BERKELEY
	UNIVERSITY OF FLORIDA
	UNIVERSITY OF KANSAS
	UNIVERSITY OF KENTUCKY
	UNIVERSITY OF MIAMI
	UNIVERSITY OF MICHIGAN
	UNIVERSITY OF MINNESOTA
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
	UNIVERSITY OF OKLAHOMA
	UNIVERSITY OF PITTSBURGH
	UNIVERSITY OF PUERTO RICO, RIO PIEDRAS
	UNIVERSITY OF TENNESSEE, KNOXVILLE
	UNIVERSITY OF WASHINGTON
	VANDERBILT UNIVERSITY

RADIOBIOLOGY OR BIOPHYSICS

COLORADO STATE UNIVERSITY
GEORGIA INSTITUTE OF TECHNOLOGY
HARVARD UNIVERSITY
JOHNS HOPKINS UNIVERSITY
PURDUE UNIVERSITY
RUTGERS UNIVERSITY
SLCANE-KETTERING DIV - CORNELL UNIVERSITY
TEXAS A & M UNIVERSITY
UNIVERSITY OF ALABAMA IN BIRMINGHAM
UNIVERSITY OF CALIFORNIA, BERKELEY
UNIVERSITY OF ILLINOIS AT URBANA
UNIVERSITY OF IOWA
UNIVERSITY OF KANSAS
UNIVERSITY OF ROCHESTER
UNIVERSITY OF WASHINGTON

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TABLE IV
RADIATION PROTECTION
CURRICULUM OR OPTION BY INSTITUTION
FALL 1973

CURRICULUM OR OPTION	INSTITUTION
MEDICAL RADIATION PHYSICS OR RADIOLOGICAL PHYSICS	
	HARVARD UNIVERSITY
	JOHNS HOPKINS UNIVERSITY
	MANHATTAN COLLEGE
	PURDUE UNIVERSITY
	SLOANE-KETTERING DIV - CORNELL UNIVERSITY
	UNIVERSITY OF CALIFORNIA, BERKELEY
	UNIVERSITY OF CALIFORNIA, LOS ANGELES
	UNIVERSITY OF CINCINNATI
	UNIVERSITY OF FLORIDA
	UNIVERSITY OF KANSAS
	UNIVERSITY OF KENTUCKY
	UNIVERSITY OF PENNSYLVANIA
	UNIVERSITY OF WASHINGTON
	VANDERBILT UNIVERSITY

ENGINEERING OR BASIC SCIENCES, HEALTH PHYSICS OPTION

COLORADO STATE UNIVERSITY
GEORGIA INSTITUTE OF TECHNOLOGY
NORTHWESTERN UNIVERSITY
UNIVERSITY OF CALIFORNIA, BERKELEY
UNIVERSITY OF FLORIDA
UNIVERSITY OF ILLINOIS AT URBANA
VANDERBILT UNIVERSITY

NUCLEAR MEDICINE BASIC SCIENCES

MANHATTAN COLLEGE

ENVIRONMENTAL HEALTH

PURDUE UNIVERSITY

RADIOLOGY ADMINISTRATION

MANHATTAN COLLEGE
UNIVERSITY OF CINCINNATI

RADIATION CHEMISTRY

RUTGERS UNIVERSITY

TABLE IV	RADIATION PROTECTION CURRICULUM OR OPTION BY INSTITUTION FALL 1973
CURRICULUM OR OPTION	INSTITUTION
ENVIRONMENTAL RADIOACTIVITY	RUTGERS UNIVERSITY
AEROSOL PHYSICS	RUTGERS UNIVERSITY
RADIOLOGICAL SCIENCE	EMORY UNIVERSITY LOWELL TECHNOLOGICAL INSTITUTE
RADIATION BIOPHYSICS	UNIVERSITY OF KANSAS
RADIOPHARMACY	TEMPLE UNIVERSITY
VETERINARY RADIOLOGY	COLORADO STATE UNIVERSITY
NUCLEAR PHYSICS	VANDERBILT UNIVERSITY

8
104



APPENDIX 6
UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

NOV 2 1973

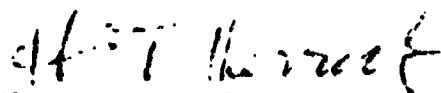
Dear Sir:

Enclosed are the forms for obtaining information on radiation protection enrollments for this fall and graduates during the past academic year. We are anxious to receive your response as quickly as possible, as the information derived from your response and those of other radiation protection faculty has proved to be useful far beyond the AEC management function for which the survey was designed. For example, the report has been used by AEC and several private firms as a recruitment tool, directing would-be employers to schools producing a particular type of radiation protection graduate.

You may note a few changes in this year's form, but the basic information will tie in with that reported previously. The breakouts for sex and minority information result from numerous requests for such information as well as to satisfy our own needs. The placement data supplied last year were of great value for making manpower projections, so we would be very grateful if your response to these questions is as complete as last year.

If there are any problems in completing the questionnaire, please place a collect call to Mrs. June S. Chewning, Acting Chief, Manpower Information Systems Branch, at 301 973-4417. We would appreciate a reply by November 12, 1973, at the latest. Thank you for treating this as a high priority request.

Sincerely,


H. T. Herrick, Director
Division of Labor Relations

Enclosures:
As stated

**U.S. ATOMIC ENERGY COMMISSION
RADIATION HEALTH AND RADIATION SAFETY
(HEALTH PHYSICS) ENROLLMENT AND DEGREE SURVEY**

100-711
100-711

IMPORTANT Please see instructions on reverse side to correctly completing this form

Name of Institution		6 7		City		31 32 Zip Code 56	
37	Department(s) Reporting	61 62	67	19 80	1	6 7	Name of Official Supplying Data
				A1			
37	Title of Official Supplying Data	66 67 Code 69	70 Telephone Number	76 79 80			
				A2			

[illegible]

Please break out the following from the totals reported above.

[illegible]

Data supplied above may be published in listings by individual institutions

Remarks:

Authorized Signature

Date _____

UNITED STATES ATOMIC ENERGY COMMISSION
Division of Labor Relations
Washington, D.C. 20545

Radiation Health and Radiation Safety (Health Physics)
Enrollment and Degree Survey

INSTRUCTIONS FOR COMPLETING FORM AEC-617

This survey is conducted by the Atomic Energy Commission as part of its continuing effort to assure itself and its contractors a supply of well prepared experts in the nuclear field. With this questionnaire we hope to determine, by degree level, the yearly supply and anticipated supply of those trained in health physics, radiation health or safety, radiological health, or similar programs, who would be qualified to be responsible for some major phase of a program for the evaluation and control of radiation hazards.

PLEASE READ THE FOLLOWING INSTRUCTIONS BEFORE FILLING OUT THE QUESTIONNAIRE:

- Instr. a. **Curriculum.** Using a separate line for each major program, report only curricula which prepare students to participate in conducting, coordinating, directing, or planning a program for the evaluation and control of radiation hazards for an installation, community, or state agency.
- Instr. b. **Report only students enrolled definitely as candidates for a degree.** Report co-op students^{*} as being enrolled full-time. If exact figures are not available, please give best estimate and indicate by "E" after the estimated number.
- Instr. c. **Pre-Doctoral Degree.** Enrollments for professional degrees beyond the bachelor's are to be included with master's degree enrollments to simplify this report. Also see Instr. d.
- Instr. d. **Doctoral Programs.** Report only enrollments specifically leading to a doctor's degree. If ultimate degree is uncertain, report as master candidates.
- Instr. e. **Women, Minorities, Foreign Students.** Requests for information about women and minorities are numerous. The number of foreign nationals is important to predicting manpower supplies. Therefore, please provide as accurate a breakout as possible. Blanks will be treated as zeros.

^{*} For purposes of this survey, a co-op student is defined as one who alternates sessions of schooling with sessions of employment in a position related to his academic specialty.

Radiation Protection Degree Survey Supplement

Reporting Institution _____ Date _____

Please indicate placement of degree recipients reported on AEC Form 617:

Placement or plans after graduation (Please show in paren. numbers returning to previously held positions)	Degree Recipients July 1972-June 1973		
	Bachelor	Master	Doctor
a. Further study			
b. Academic employment (students employed part time should be shown in a.; also see f.)			
c. U. S. Government employment			
d. GOCO (Gov.-owned, Contractor- operated installations) employment			
e. State and Local Government employment			
f. Medical facilities (including teaching hospitals) employment			
g. Industry employment			
h. Military service			
i. Unknown			

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